AMENDMENTS TO THE SPECIFICATION

Please amend the second full paragraph in page 83 as follows:

In the synchrotron radiation apparatus and the X-ray exposure system according to the present invention, the X-ray mirrors 3a to 3c, the converging mirror 22 and the magnifying mirror 23 are set under ultrahigh vacuum environment. On the other hand, the X-ray mask 6 and the semiconductor wafer 9 are set under atmospheric pressure environment, or in a decompressed helium atmosphere or in the air. Therefore, an X-ray transmission window (not shown) defining a vacuum partition is set between the magnifying mirror 23 and the X-ray mask 6. Beryllium may be employed as the material for this X-ray transmission window. This beryllium has no absorption edge in the wavelength region of 0.45 to 0.7 nm. Therefore, the X-ray transmission window employing a beryllium film can efficiently transmit X-rays of the aforementioned wavelength region. Thus, it is preferable to employ a material such as beryllium having an absorption edge only in at least either one of a wavelength region of less than 0.45 nm and a wavelength region exceeding ~~07~~ 0.7 nm, i.e., a material having no absorption edge in the wavelength region of at least 0.45 nm and not more than 0.7 nm also as the material for the X-ray transmission window. When the thickness of a portion transmitting X-rays in the X-ray transmission window can be sufficiently reduced, however, a material other than the above may be employed.